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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,341	02/28/2002	Takashi Suzuki	046124-5115	5600

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EXAMINER

PATEL, GAUTAM

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,341

Applicant(s)

SUZUKI ET AL.

Examiner

Gautam R. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/11/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Claims 1-3 are pending for the examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The disclosure is objected for following reasons.

The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. It is recommended that the title should reflect the gist of or the improvement of the present invention.

Correction is required.

Claim Rejections - 35 U.S.C. § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 7 3 are rejected under 35 U.S.C. § 102(b) as being anticipated by et al., US. patent 5,822,346 (hereafter Ari).

As to claim 1, Ari discloses the invention as claimed; a drive current supply circuit [see Figs. 1] including a first current mirror circuit, and a control circuit, comprising:

a first current mirror circuit [fig. 1, unit 14, 15, & 11] having two parallel lines [output of 10 or 11] & output of 14, 15 and 16], said laser diode [fig. 1, unit 1] being connected with one [line from unit 14] of the two parallel lines; and

a control circuit [fig. 1, unit 4, & especially 10, 11, 12 and 13] connected with the other of the two parallel lines, said control circuit controls the current flowing in this line

in accordance with a potential of this line, this potential comprising a steady DC component [read power current I_r] when reading data; and this potential comprising a drive signal component added [fig. 1, output of 10 to 13 are added] to said DC component when writing data [col. 5, line 35 to col. 6, line 63].

5. The aforementioned claim 3, recites the following elements, inter alia, disclosed in Ari:

a second current mirror circuit [fig. 1, unit 16 & 12] having two parallel lines [output of 15], one of said lines of said second current mirror circuit being connected with said laser diode, and wherein said control circuit controls the current flowing through the other of said lines of said second current mirror circuit in accordance with a potential of the other of said lines, this potential comprising a steady DC component when reading data [I_r]; and this potential comprising a drive signal component added to said DC component when writing data [col. 5, line 35 to col. 6, line 63].

Claim Rejections - 35 U.S.C. § 103

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ari as applied to claims 1 and 3 above.

As to claim 2 Ari teaches all of the above elements including DC component for read mode and combination of AC and DC for write mode and several current mirror circuits. Ari does not teach the well know details of the construction of these mirror current sources such as that they are made up of field-effect transistors.

"Official Notice" is taken that both the concept and the advantages of providing field-effect transistors for construction of the current mirror are well known and expected

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in the art. It would have been obvious to include field-effect transistors to Ari's design as these field-effect transistors are known to provide high switching speed and are easy to construct on an integrated device. These concepts are very well known in the art and do not constitute a patentably distinct limitation, per se [M.P.E.P. 2144.03].

Other prior art cited

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Kaku et al. (US. Patent 5,629,913) "Optical disk".
- b. Minami et al. (US. patent 5,276,671) "Control apparatus".
- c. Schrodinger (US. patent 6,587,489) "Electronic driver ...".
- d. Kimura (US. patent 6,496,525) "Laser driver".
- e. Kimura (US. patent 6,516,015) "Laser driver and optical ...".

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.



Gautam R. Patel
Primary Examiner
Group Art Unit 2655

GAUTAM R. PATEL
PRIMARY EXAMINER

October 26, 2004